Arizona Transportation Research Center

Newsletter — April 2003

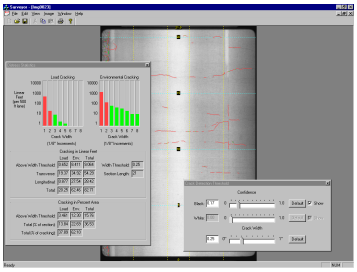
Project Updates

Highlights from selected projects

STATE PLANNING AND RESEARCH (SPR) PROJECTS

SPR 439 – *PASCO Digitization*

Lockheed Martin recently completed phase two of the Surveyor software development for the Arizona Department of Transportation. The software development allows the Department to take digitized images of pavement surfaces and conduct automated distress analysis. The software provides the lineal feet of cracking in 1/8 inch width intervals. The software outputs distress quantities similar to the new AASHTO distress procedures as well as in the format used by ADOT's pavement management system (PMS). This allows direct linkage between the research efforts and PMS efforts.



computer screen readout

SPR 502 – *Virtual Private Networks*

This study evaluated the application of virtual private network (VPN) technology to provide remote access by employees and for LAN-to-LAN connectivity to other government agencies with a need for high-volume processing and retrieval of ADOT records. The system is being made ready for widespread applications. The system may soon be available for ADOT telecommuters.

SPR 509 – *Develop and Evaluate Hazardous Materials Inventory Status for ADOT*

This research effort focused on determining pollution prevention requirements under Arizona law. Researchers working closely with ADOT and Arizona Department of Environmental Quality staff found that ADOT hazardous waste generation is below levels requiring extensive program requirements. During 2000, two chemicals, methanol and ethylene glycol were found in quantities that called for a pollution prevention (P2) plan. The P2 plan was prepared as part of the project.

SPR 510 – *Performance of Bridge Deck Joints for Various Types of Bridges*

Under this research project a national literature search was completed and an economic model developed for the life cycle of bridge deck joints on ADOT facilities. The research is now focusing on ways to increase the ADOT deck joint life cycle. So far the research indicates that construction and maintenance practices are significant factors in the deck joint life cycle.

RWIS site

SPR 525 – *Evaluation of Roadway Weather Information System (RWIS) Options for ADOT*

ADOT deployed RWIS (Road Weather Information Systems) in two early phases, with variable success. Problem areas such as communication capabilities, security concerns, and maintenance issues were addressed in order to move the project toward statewide deployment. This research project is developing a complete RWIS infrastructure solution that incorporates the existing sites, where feasible, and creates an enterprise-wide architecture for an RWIS system that meets ADOT's current and future needs. The project is 90 percent complete. It is being conducted by System Innovations, Inc., who is also involved in the deployment of the new-generation RWIS systems, as programmed in ADOT's statewide ITS strategic plan.

ATRC UPDATE

ATRC coordinated an effort to revitalize the ADOT Research Council. With concurrence from the research Steering Committee the prior Research Council was reorganized into two new Research Councils. The ITEP Research Council will focus on the Intelligent Transportation Systems, Traffic & Safety, Environment, and Planning & Administration emphasis areas. The MSM Research Council will address the Materials & Construction, Structures, and Maintenance areas.

ATRC has completed the first comprehensive ADOT research implementation report. Individuals who do not receive a copy who would like one may contact ATRC or visit the ATRC web page at: www.dot.state.az.us/ABOUT/atrc/index.htm

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